



Opinion

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## Pregnancy and Hepatitis B: A Mini Review



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### Opinion

Considered as a global problem, hepatitis B virus (HBV) infection is the cause of 60% of cases of primary liver cancer in the world and the most common carcinogen after smoking. Regions of the world (the major section of Asia and Pacific Islands, Africa and the Middle East), where chronic hepatitis B virus (HBV) infection is endemic, are inhabited with approximately 45% of the world's population (2). HBV infection occurs mainly during infancy and early childhood in the endemic areas. In addition, mother-to-child transmission (MTCT) is the cause of about half of the chronic HBV infections. Prevention of MTCT is an essential step toward the reduction of the global burden of chronic HBV. Pregnancy and associated jaundice is a deadly combination, which leads to a significantly high perinatal morbidity and mortality and requires an early diagnosis and careful monitoring.

There is several unusual aspects in HBV infection in pregnancy, including the effect of pregnancy on HBV infection, maternal-neonatal potential viral transmission, and probable prevention of the infection through antiviral medications and their potential teratogenic impact. HBV infection during childhood is regarded as an important public health problem due to the high rate of associated liver cirrhosis and HSC in the future periods of life. Prevention of mother-to-child transmission is significantly important in global eradication of chronic HBV infection. While the effects of HBV infection on pregnancy outcomes are generally favorable, they depend on the severity of liver disease. Despite the minimization of mother-to-child transmission by current immuno-prophylaxis strategies, high levels of viremia in mothers may be a factor for the small but reproducible failure rate of the mentioned strategies.

Occurrence of the high rate of perinatal transmission during delivery is of paramount importance since it can be prevented by vaccine and/or hepatitis B hyperimmunoglobulin (HBIG) and because the high rate of chronicity is related to early facing with the virus. Therefore,

the World Health Organization has suggested that all pregnant women be tested for HBsAg and HBIG be applied with the vaccine to the newborns of mothers with determined HBsAg positive at the time of birth. Postexposure prophylaxis (PEP) containing a birth dose of (HBV) vaccine and Hepatitis B Immune Globulin can be administered within 12 hours of birth to provide 90% protection in mothers with confirmed infection. Reporting of maternal HBsAg positivity or perinatal HBV by healthcare providers must encourage public health nurses toward the initiation of nurse case management.

An analysis of maternal and fetal risks and benefits must be carried out in all decisions about initiating, continuing, or stopping the treatment of hepatitis B virus (HBV) during pregnancy. According to the statistics on infected individuals (infants or young children), about 25% of the cases with chronic infection die prematurely from cirrhosis and liver cancer, the majority of whom are asymptomatic until the onset of end-stage liver disease. This makes perinatal transmission significantly important.

Risk of mother-to-child (vertical) transmission can be efficiently prevented through compulsory testing of HBs antigen in all pregnant women in their second trimester and by systemic serovaccination of newborns of infected mothers. However, after serovaccination of the newborn, breastfeeding is not contraindicated in maternal HBV infection. This implies to mothers on active treatment with tenofovir due to lack of absorption of the medication by breast milk. Tenofovir remains a logical step-up treatment in the management of active antiviral treatment and in the absence of viro-suppression with lamivudine. Recognition of maternal virological characteristic, assessment of liver disease severity and minimization of risk of mother-to-child transmission of infection must be taken into consideration in the planning of pregnancy and management of chronic hepatitis B virus during pregnancy.



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